

Translation

PATENT COOPERATION TREATY

PCT/CH2003/000609



PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P2073 PCT	FOR FURTHER ACTION	See Form PCT/IPEA/416
International application No. PCT/CH2003/000609	International filing date (day/month/year) 09 September 2003 (09.09.2003)	Priority date (day/month/year) 03 October 2002 (03.10.2002)
International Patent Classification (IPC) or national classification and IPC H01J 37/32, H01J37/32		
Applicant TETRA LAVAL HOLDINGS & FINANCE S.A. et al.		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of <u>6</u> sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising: a. <input type="checkbox"/> (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows: <input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. b. <input type="checkbox"/> (sent to the International Bureau only) a total of _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).
4. This report contains indications relating to the following items: <input checked="" type="checkbox"/> Box No. I Basis of the report <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input type="checkbox"/> Box No. VII Certain defects in the international application <input type="checkbox"/> Box No. VIII Certain observations on the international application

Date of submission of the demand 29 March 2004 (29.03.2004)	Date of completion of this report 10 May 2004 (10.05.2004)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/CH2003/000609

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☐ This report is based on translations from the original language into the following language _____, which is language of a translation furnished for the purpose of:
- ☐ international search (under Rules 12.3 and 23.1(b))
- ☐ publication of the international application (under Rule 12.4)
- ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

- ☒ The international application as originally filed/furnished
- ☒ the description:
- pages _____ 1-11 _____, as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☒ the claims:
- pages _____ 1-12 _____, as originally filed/furnished
- pages* _____, as amended (together with any statement) under Article 19
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☒ the drawings:
- pages _____ 1-4 _____, as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/CH 03/00609

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-12	YES
	Claims		NO
Inventive step (IS)	Claims	1-12	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-12	YES
	Claims		NO

2. Citations and explanations

1. This IPER makes reference to the following documents:

D1: JP-11092579

D2: DE-3735162

D3: JP-63112441

D4: US-5224441

D5: US-4322276

2. Clarity (PCT Article 6)

The present claim 1, lines 15 and 16, states that the magnetron fronts of the magnetron electrodes (6) "are arranged parallel to and adjacent one another...". However, this is inconsistent with those embodiments in the present description which use a rotating drum (3) as means for supporting and transporting the strip-like material; see, for example, figure 1 and also claim 2 (PCT Article 6).

In those embodiments, the magnetron fronts are adjacent one another, but are clearly not parallel to one another. At most, the magnetron fronts are parallel to one another when using a rotating belt

as means for supporting and transporting the strip-like material (see page 4, lines 19 and 20), with the magnetron fronts thus being arranged in a straight row (this being only briefly mentioned).

Consequently, in the examination pursuant to PCT Article 33 that follows, it is assumed that the magnetron fronts (in claim 1) are not necessarily parallel to one another (i.e. the words "parallel to and" are ignored).

3. Novelty (PCT Article 33(2))

D1 (see figure 1) discloses a device for treating a strip-like material in a plasma-based process as per the preamble of claim 1, wherein three independent magnetron electrodes (10, 11, 12) with rectangular magnetron fronts are arranged adjacent one another at a distance from the transport roller (3). No defined reference voltage appears to be connected to the transport roller. Each of the three independent magnetron electrodes (10, 11, 12) is supplied by its own voltage source (17, 18, 19), one AC and two DC voltage sources.

D1 to D5 therefore do not anticipate a device such as defined in the present claim 1, comprising a plurality of magnetron electrodes, each supplied by its own AC voltage source.

D2 (see figure 13; column 7, line 61 to column 8, line 1) discloses a device as per the preamble of claim 1, wherein two independent magnetron cathodes (33, 34) with rectangular magnetron fronts are arranged adjacent one another at a distance from the

roller anode (6). D2 thus concerns a DC sputtering-based process.

D3 (see the drawing and the abstract) discloses a device for treating a transparent substrate (16) as per the preamble of claim 1, using two magnetron cathodes (5, 6) that are operated independently of one another and two gas inlets (10, 11). D3 thus concerns a DC sputtering-based process.

In D4, as cited and described in the description of the present application, the voltage-supplied roller electrode (32) is placed opposite a coaxial and grounded shield (48).

D5 (see figure 3 and columns 5 and 6) discloses a device for treating a strip-like material in a plasma-based process, using a plurality of planar magnetron cathodes (40a, 40b, 40c). D5 thus concerns a DC sputtering-based process.

D1 to D5 therefore do not anticipate a device such as defined in the present claim 1, comprising a plurality of magnetron electrodes, each supplied by its own AC voltage source.

The subject matter of the present claims 1 to 12 thus appears novel (PCT Article 33(2)).

4. Inventive step (PCT Article 33(3))

None of the cited documents suggests using a plurality of magnetron electrodes, each supplied by its own AC voltage source in a device for treating a strip-like material in a plasma-based process such

as known from D1.

The subject matter of the present claims 1 to 12 therefore appears to be inventive (PCT Article 33(3)).

5. Industrial applicability (PCT Article 33(4))

The subject matter of the present claims 1 to 12 appears to be clearly industrially applicable (PCT Article 33(4)).

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NOTIFICATION OF TRANSMITTAL
OF COPIES OF TRANSLATION
OF THE INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY
(CHAPTER I OR CHAPTER II
OF THE PATENT COOPERATION TREATY)
(PCT Rule 72.2)

From the INTERNATIONAL BUREAU

To:

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EINGANG

09. Juni 2005

Frei
Patentanwaltsbüro

Date of mailing (day/month/year) 09 June 2005 (09.06.2005)	
Applicant's or agent's file reference P2073 PCT	IMPORTANT NOTIFICATION
International application No. PCT/CH2003/000609	International filing date (day/month/year) 09 September 2003 (09.09.2003)
Applicant TETRA LAVAL HOLDINGS & FINANCE S.A. et al	

1. Transmittal of the translation to the applicant.

The International Bureau transmits herewith a copy of the English translation made by the International Bureau of the international preliminary examination report established by the International Preliminary Examining Authority.

2. Transmittal of the copy of the translation to the elected Offices.

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following elected Offices requiring such translation:

AZ, CA, CH, CN, CO, GH, KG, KP, KR, MK, MZ, RU, TM

The following elected Offices, having waived the requirement for such a transmittal at this time, will receive copies of that translation from the International Bureau only upon their request:

AE, AG, AL, AM, AP, AT, AU, BA, BB, BG, BR, BY, BZ, CR, CU, CZ, DE, DK, DM, DZ, EA, EC, EE, EP, ES, FI, GB, GD, GE, GM, HR, HU, ID, IL, IN, IS, JP, KE, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MN, MW, MX, NI, NO, NZ, OA, OM, PG, PH, PL, PT, RO, SC, SD, SE, SG, SK, SL, SY, TJ, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report.

It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.

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